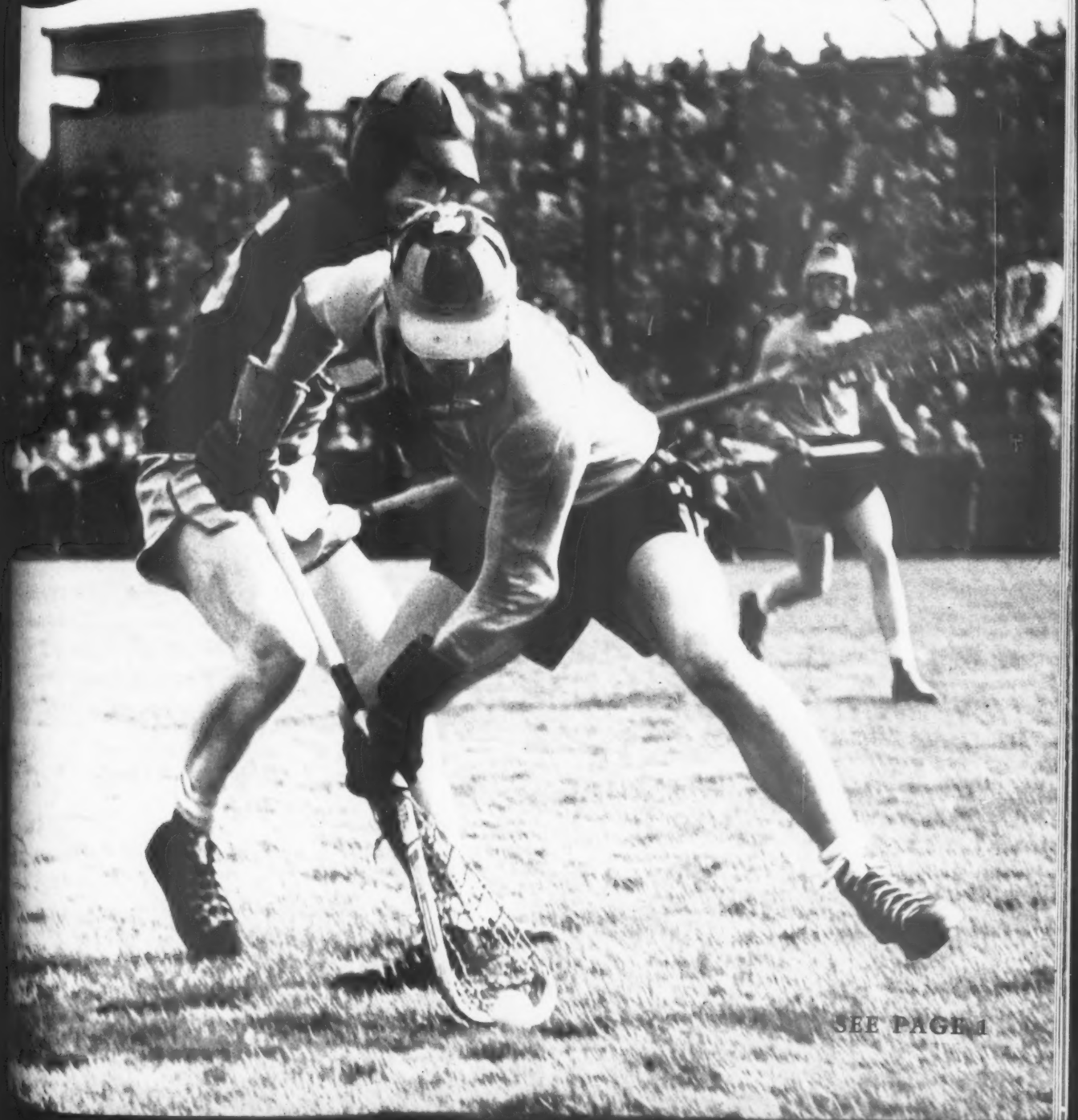
THE Johns Hopkins MAGAZINE

June 1951



SEE PAGE 1

Medal of Honor

Master Sergeant Travis Watkins, of Gladewater, Texas—Medal of Honor. On September 3, 1950, near Yongsan, Korea, Sergeant Watkins was wounded and paralyzed from the waist down. Ordering his squad to pull out and leave him, he stayed behind and died covering their withdrawal.

Sergeant Watkins gave his life for freedom. What can you do?

This. You can begin today to do your share in defense of the country he defended far "above and beyond the call of duty" by buying more . . . and more . . . and more United States Defense* Bonds.

For your Defense Bonds strengthen America. And if you will make our country strong enough now, American boys may never have to give their lives again. Defense is *your* job, too.

Remember that when you're buying bonds for national defense, you're also building a personal reserve of cash savings. Remember, too, that if you don't save *regularly*, you generally don't save at all. So go to your company's pay office—now—and sign up to buy Defense Bonds through the Payroll Savings Plan. Don't forget that now *every United States Series E Bond you own* automatically goes on earning interest for 20 years from date of purchase instead of 10 years as before. This means, for example, that a Bond you bought for $18.75 can return you not just $25 but as much as $33.33! For your country's security, and your own, buy U. S. Defense Bonds now!

*U.S. Savings Bonds are Defense Bonds - Buy them regularly!

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THE Johns Hopkins MAGAZINE

VOLUME II June, 1951 NUMBER 9

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The Cover

The white-jerseyed lacrosse player on this month's cover, blocking an opponent as he scoops up the ball, is Byron Forbush. Co-captain of this year's lacrosse team and one of Hopkins' varsity attackmen, Byron is typical of the Hopkins athlete who must also be a high-ranking student. His story in pictures begins on Page 15.

Photo by Robert M. Mottar

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The attack on this killer is world-wide. Here is a survey of the work of the scores of research workers and clinicians at Johns Hopkins who are seeking answers to the problem of cancer.

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Scientists at Johns Hopkins' Applied Physics Laboratory have made photographs which show, in remarkable sequence, the development of a flame in its early millionths of a second.

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The story of Byron Forbush exemplifies the Johns Hopkins sports philosophy, a refreshing relief from the tales of big-time athletic commercialism which have recently shadowed America's sports pages.

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A digest of recent developments at the University and Hospital.

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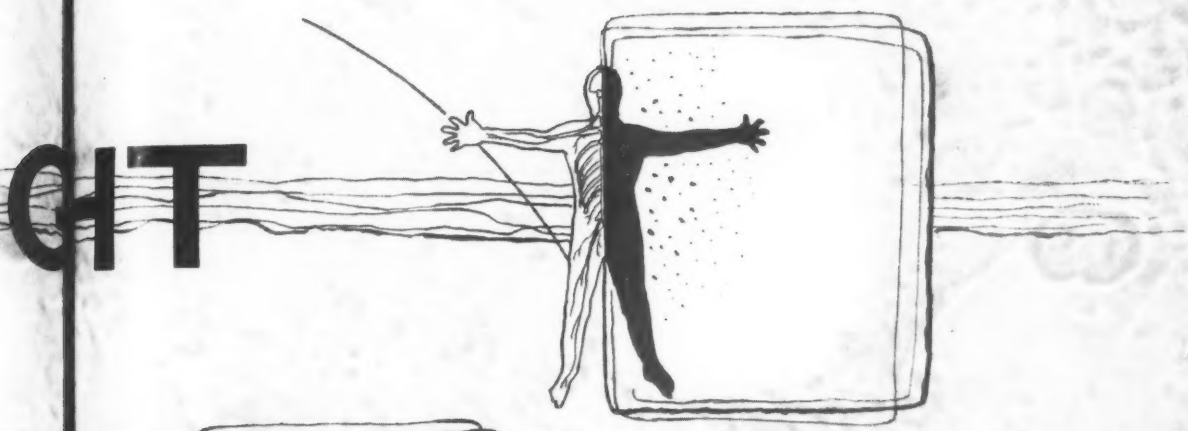
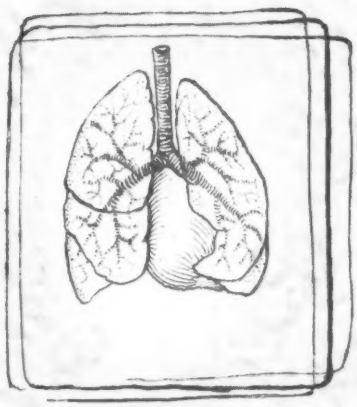
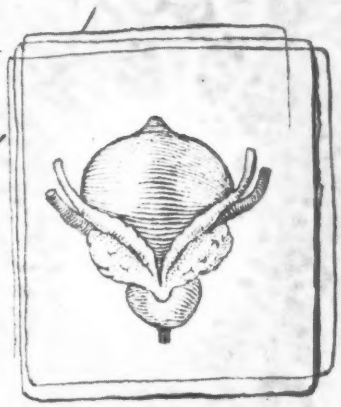
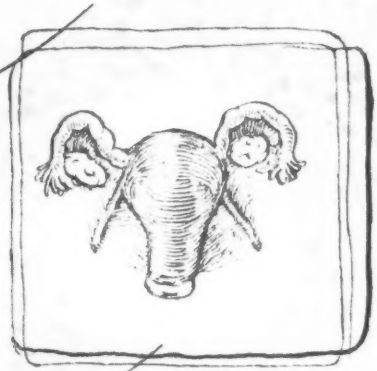
CANCER FIC









A survey of Hopkins' attack on the disease

DESPITE the tremendous volume of information that has been poured out to the general public through nearly every means of communication, it is doubtful if more than a relatively few laymen have any true idea of the size and extent of the scientific war on cancer.

In medical institutions throughout the world—schools, hospitals, and clinics—research scientists and clinicians in nearly every branch of medicine are pressing the search for methods to halt one of mankind's most dreaded diseases. And assisting in the battle directly and indirectly are men in biology, physics, chemistry, engineering, and other fields of science.

Perhaps no single disease known to man has been attacked simultaneously on so many different fronts by so many individuals. The broad scope of the battle and persistent

ELECTRON-MICROSCOPE PHOTOGRAPH OF LIVING TISSUE, MADE BY DR. GEORGE O. GEY, FORMS THE BACKGROUND FOR THIS PAGE

efforts of scientists have already produced many new techniques in diagnosis and treatment of cancer in humans. The percentage of cures effected through surgery and irradiation in various types of cancer has shown marked increase during the past few years, while chemicals capable of temporarily halting the growth have been discovered.

But the basic cause of cancer—the reasons why and how normal cells turn malignant—and methods to prevent the change are still unknown. The efforts to break through the barriers to the unknown and acquire new knowledge with which to fight cancer can be strikingly illustrated by the presentation of a picture of "what goes on" in a large joint medical enterprise such as the Johns Hopkins Medical Institutions.

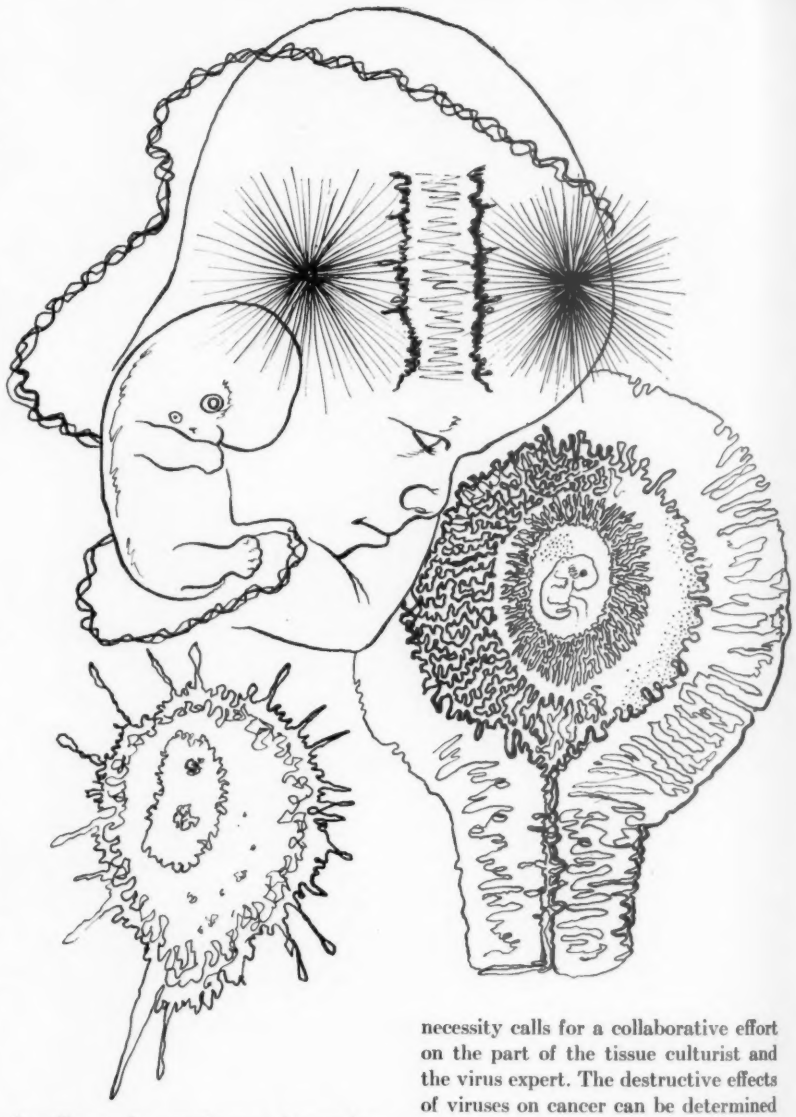
ANY description of cancer research at Hopkins should start with the basic or fundamental studies relating to the biology, physiology, and chemistry of the living cells. Here scientists are trying to learn more about the structure, the life, and growth of normal and malignant cells. Here too, they are trying to learn more about the functions of the cells under varying conditions, in relation to forces within the body and from outside such as viruses, chemicals, ultraviolet rays and x-rays, soot and dusts present in the air we breathe, and other environmental influences.

In this field we find the collaborative studies of Dr. George O. Gey, of the department of surgery, with Dr. Frederick B. Bang, of the department of medicine, and Dr. Leslie Hellerman, of the department of physiological chemistry.

Dr. Gey and his laboratory assistants maintain an extensive system of tissue culture, growing numerous strains of normal and malignant cells of animal and human origin in test tubes as source material for the various studies. Some of the strains have been kept alive in continuous culture for more than twenty years.

With the use of phase and electron microscopy, still and motion pictures are employed to observe the living cells in the test tubes as they divide and multiply. Under these methods the structural organization of the normal and malignant cells and their effect on one another can be studied and compared.

Dr. Gey's system of tissue culture makes possible the development of cell strains through several generations of animals under controlled conditions of



breeding and a continuous observation of the cells in the test tube which would be impossible in the living host. At the present time, he has studied four strains of rat cells which have changed from normal to malignant in the test tube over a period of years. Numerous factors, from the type of solution in which the cells are maintained to inherited characteristics of the various hosts, may have had some influence in causing the changes to cancer. Only tireless observation and experiment will provide the answer.

IT is known that all viruses require cells for their growth, and the adding of viruses of different types to tissue cultures provides an opportunity to study what cells are susceptible and how the virus grows in the cell. This of necessity calls for a collaborative effort on the part of the tissue culturist and the virus expert. The destructive effects of viruses on cancer can be determined by using specific strains of normal and malignant cells. Dr. Bang is collaborating in this phase of the studies and, with Dr. Gey, has actually found that an encephalitis virus from the horse will quickly destroy a certain strain of cancer cells and will not harm the normal prototype cell. This finding opened up an inquiry into the destructive effects of this and other viruses on various lines of cells, both human and animal, carried in continuous culture.

In addition to the strain of cells referred to above, where the virus will attack and kill the cancer cell but not the normal, the doctors have found other strains of both animal and human tumor and normal cells that are extremely susceptible to the virus. Still other cell strains are virus carriers and both the virus and the cells grow with minimal destruction of the cells. Since

some viruses help to provoke cancer in animals, it becomes of great importance to understand the behavior of these viruses in susceptible cells.

Mass cultures and suspensions of cells are made available to Dr. Hellerman for his studies. Dr. Hellerman is concerned primarily with the mechanism and control of enzyme activities, the numerous chemical catalysts which govern growth and the processes by which cells transform food into energy, and, in parallel, the chemical processes which interfere with the metabolism of normal and malignant cells.

Like the others engaged in fundamental studies, Dr. Hellerman is not concerned solely with malignant growth but is constantly searching for new methods of approach to gain additional knowledge of all phases of cell development and the factors which may influence their growth.

AT Homewood, Drs. Sidney P. Colowick and Nathan O. Kaplan, of the department of biology, are also studying the chemical processes of the cells. While it is known that all cells, normal and malignant, need an adequate supply of energy for growth, and that certain compounds such as carbohydrates and fats are used in supplying the energy, the exact nature of how the compounds are transformed is not fully known. Knowledge of the chemistry of the energy process may enable science to regulate the growth.

Dr. Jonas S. Friedenwald, associate professor of ophthalmology, is using the simple tissue of the eye of the rat in his studies on the effects of radiation on tissue growth. Eye tissue is highly desirable for this type of study for, like certain areas of the skin, its growth is slow and steady. X-rays are known to have useful properties in the treatment of cancer chiefly through killing or causing mutation of the malignant cells, but only a relatively small amount of detail is available as to how x-rays affect cell mitosis or division. Dr. Friedenwald is seeking additional knowledge on the mechanism by which x-rays interfere with the preparation of the cells to divide. He has already found differences in tissue growth between rats with and without anesthesia for the same amount and type of radiation.

This survey of cancer research projects at Johns Hopkins was made by Joseph B. Kelly, of the Medical Institutions' staff. The illustrations are by Zolton Yuhasz, Seymour Fradin, and Joseph M. Yuhasz, students in the University's Department of Art as Applied to Medicine.

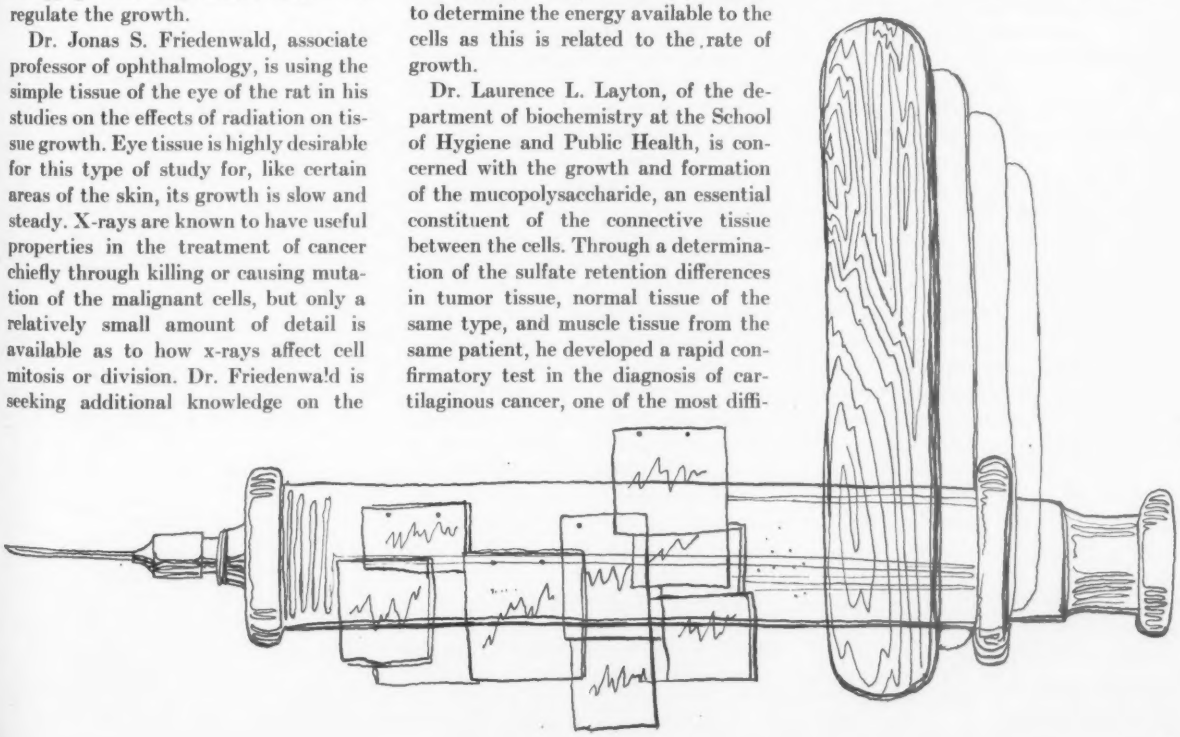
The phenomenon of immunity as related to cancerous growth is a part of the research conducted by Dr. Manfred M. Mayer, of the department of bacteriology at the School of Hygiene and Public Health. Using red blood cells of animals as the focus of his investigation, Dr. Mayer is employing processes similar to those used to immunize humans and animals against contagious diseases.

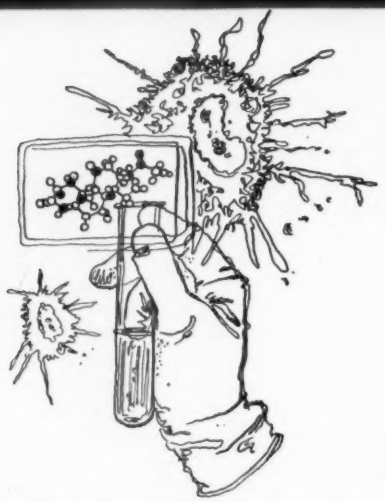
DR. Louis B. Flexner, of the Carnegie Institution department of embryology at the School of Medicine, is approaching the study of growth from still a different angle. Normal growth has been described but not explained. Once normal growth is explained and fully understood, it may be far less difficult to determine the energy available to the cells as this is related to the rate of growth.

Dr. Laurence L. Layton, of the department of biochemistry at the School of Hygiene and Public Health, is concerned with the growth and formation of the mucopolysaccharide, an essential constituent of the connective tissue between the cells. Through a determination of the sulfate retention differences in tumor tissue, normal tissue of the same type, and muscle tissue from the same patient, he developed a rapid confirmatory test in the diagnosis of cartilaginous cancer, one of the most difficult to determine in its metastases or spread to other parts of the body. Dr. Layton in further tests discovered that sulfate is necessary to rapidly-growing embryo tissue and for the regeneration of tissue in healing wounds. In further steps along these same lines he has recently uncovered evidence of the chemical manner in which cortisone works upon cells and tissues in relieving arthritis and other diseases. By employing radioactive sulfur in cultured tissues so that chemical exchanges could be traced, Dr. Layton found that cortisone interfered with the production of chondroitin sulfate, a vital step in connective tissue formation. Additional studies have shown that cortisone inhibits the formation of the mucopolysaccharide in living rats and prevents the healing of wounds.

In the department of pharmacology, Dr. Morris Rosenfeld is conducting research on the purification of the growth-promoting principle of embryonic tissue. As in other tissue growth research, a complete understanding of normal growth may bring the knowledge necessary to inhibit and prevent malignant growth.

IN the fundamental classification, too, are the chemotherapeutic studies of Dr. Emanuel B. Schoenbach, of the department of preventive medicine. This investigation concerns the toxi-





How much cancer is curable?

With early expert diagnosis and expert surgical and radiological treatment, one can expect the following "five-year cures" in these types of cancer:

SKIN—approximately one hundred per cent.
CERVIX—approximately seventy-five per cent.
UTERUS—approximately seventy-five per cent.
BREAST—approximately forty per cent.
STOMACH—approximately twenty per cent.
RECTUM—approximately fifty per cent.
BRONCHUS—approximately twenty per cent.
BLADDER—approximately twenty-five per cent.
ESOPHAGUS—less than one per cent.
ANTERIOR TWO-THIRDS OF TONGUE—approximately thirty per cent.
POSTERIOR ONE-THIRD OF TONGUE—less than ten per cent.

The "five-year cure" means that the patient is alive and well, without cancer, five years after completion of the treatment. These figures depend upon early expert analysis and treatment.

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cology, screening, and mechanism of action of various physical, chemical, and biological agents on the viability and growth of cells.

Here the scientists are approaching the problem from the opposite direction. Working directly with cancerous tissue of various types, they are attempting to screen out chemicals and other agents found outside and inside the body which will influence the tumor growth without adverse effect on the normal growth. When promising agents or combinations are found they are then subjected to numerous tests to determine the how and why of the action. Lengthy and rigid tests on animals are then made for toxicity and other influences on the essential functions of the body. When all tests prove satisfactory, treatment and clinical observation of patients are begun.

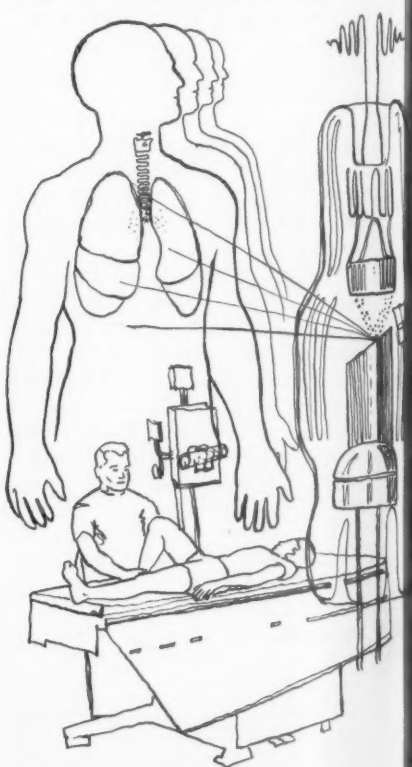
To date, a number of promising leads have been uncovered, some of which, although they do not cure, will bring about a remission of symptoms and temporarily halt the cancerous growth. Several doctors have expressed the opinion that a chemical cure for cancer will be discovered within a relatively few years. In addition, Dr. Schoenbach and his associates are conducting studies of the nucleoproteins, the basic building blocks of cells, as well as other proteins in the body, in an attempt to classify the abnormalities caused by cancer.

MANY special studies of specific types of cancer in humans are also concerned with the fundamental aspects of malignant growth. Many research projects of this kind cover all phases of the disease as it is found in a particular area or organ of the body. In these studies, doctors are seeking new knowledge of not only the cause and peculiarities of growth of a specific type of cancer, but also the manner of its metastases or spread to other parts of the body, better methods of diagnosis, and new methods of treatment and prevention.

Studies of this type include those under the direction of Dr. William W. Scott, professor of urology and chairman of the Committee on Atypical Growth. Dr. Scott is primarily interested in prostatic cancer, which surveys show occurs in fifteen per cent of men over fifty years of age. He has conducted research over several years on the factors influencing the growth and activity of the prostate gland in men and animals. In collaboration with Drs. John Eager Howard, Herbert Brendler, W. E. Chase, and K. M. Lynch, Jr., he is studying the effects of androgen and estrogen (male and female sex hormones) on this type of cancer.

Studies of malignant and non-malignant growth in the generative tract of women have likewise been carried out for some years under the direction of Dr. Richard W. TeLinde, professor of gynecology. Dr. Gerald Galvin and Dr. TeLinde have been working for the past ten years on pre-invasive cancer of the cervix, which when treated in that stage can be cured. The specific contribution of Drs. Galvin and TeLinde has been to produce evidence to show that this condition frequently precedes advanced cancer of the cervix. Cancer of the cervix comprises approximately fifteen per cent of all cancer deaths in women and carries with it a mortality of seventy-five per cent. More recently, Drs. Howard Jones, Jr., Galvin, and TeLinde have studied the case histories of cancer of the cervix. On questioning, it was found that thirteen of these women had previously been in the hospital, at which time a biopsy of the cervix was taken. Re-examination of the biopsied tissue of these thirteen women showed the pre-invasive cancer, in eleven of the thirteen cases, had been present from one to nineteen years.

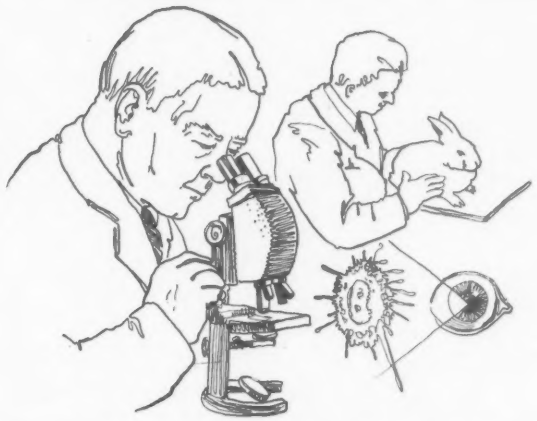
Dr. Roger Scott and Dr. TeLinde have also succeeded in reproducing in monkeys the disease known as endometriosis. This condition, which is a benign growth, is relatively frequent and appears to be on the increase among young and middle-age women. It ac-



counts for much sterility in women, as well as for pelvic pain. By producing the disease in monkeys, the doctors can study the characteristics of the condition, and ultimately the investigations should be fruitful as to prevention and treatment.

Dr. Maurice Sullivan, assistant professor of dermatology, has been carrying on studies of all types of skin cancer. Although skin cancer is practically one hundred per cent curable by surgery, Dr. Sullivan is using chemotherapeutic methods to determine the effect of various kinds of chemicals in inhibiting and curing this kind of cancer.

Dr. Samuel P. Asper, Jr., is pursuing studies on the application of radioactive iodine in the diagnosis and treatment of cancer of the thyroid.



THE relation of the endocrine glands to malignancy and abnormal growth in children and adolescents is part of the research program under the direction of Dr. Lawson Wilkins, associate professor of pediatrics. Dr. Wilkins has attracted wide attention among medical scientists for his work on the use of cortisone in the treatment of an adrenal disorder which in girls causes development of male characteristics and in boys leads to precocious sexual development which at five years of age may resemble that of a mature man. The condition, which develops before birth, becomes progressively more pronounced with growth and persists throughout life. Until now it has been impossible to control. Dr. Wilkins has reported on ten cases to date, involving six children between eight and nineteen years of age and four infants. The longest treatments have run ten months; during that time four of the older girls have apparently been definitely feminized while others are progressing toward normal sex development.

Methods are being adopted for the more accurate diagnosis of adrenal tumors, based on the spectrophotometric analysis of the adrenal hormones in the urine. Likewise the administration of cortisone has no effect on the output of steroids in cases of adrenal tumor, whereas it causes marked suppression of other types of overactivity of the adrenals.

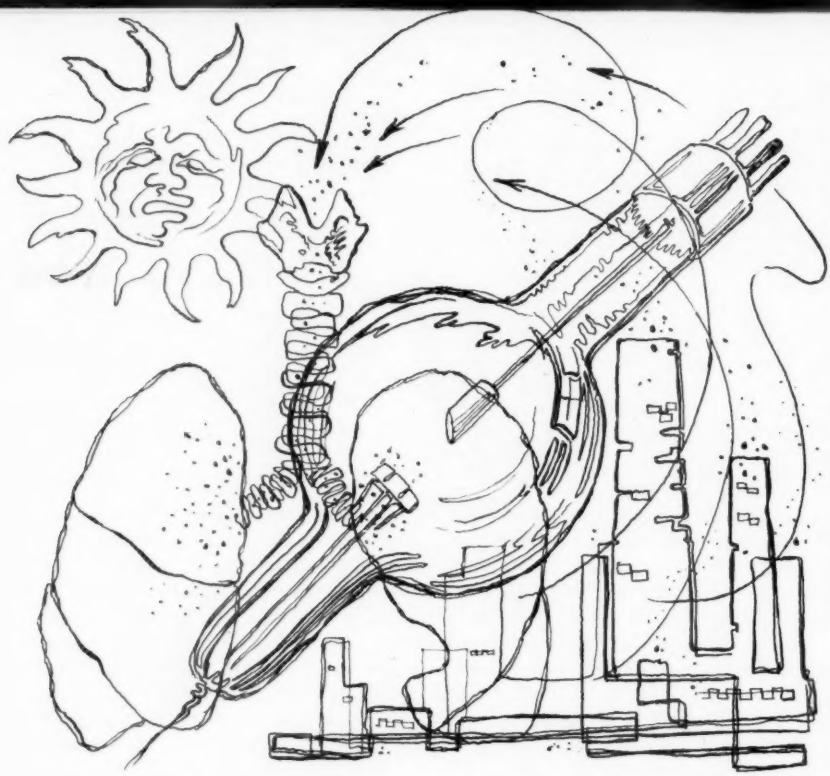
In the Tumor Clinic at the Johns Hopkins Hospital, Drs. Edward F. Lewison and Robert G. Chambers are studying the effects of sex hormones in arresting advanced breast cancer in women. Although the use of these hormones in breast cancer is not new and it is known that they will not cure, this type of treatment benefits many patients who can secure relief in no other way. This study is part of a broad investigation conducted in many large medical institutions throughout the country under the sponsorship of the Committee on Research of the Council on Pharmacy and Chemistry of the American Medical Association. The Hopkins men are also investigating the use of other hormones and their effect on this type of cancer.

No listing of the special studies in cancer at Johns Hopkins would be complete without the name of Dr. Warfield M. Firor, who has had a particular and active interest in all types of cancer research for many years. Dr. Firor has been instrumental in launching a number of research projects, and he has collaborated in the laboratory and clinically in several different studies. For the past four years, he has arranged programs and presided at a series of cancer seminars, which have brought outstanding figures in this field of research to present their work and findings to students, staff, and faculty.

Dr. John D. Strong, professor of physics, is working on ultraviolet spectrography and the development of an instrument which should have wide use in cancer research. This infra-red instrument will be able to analyze samples of tissue smaller than the normal cell. Many types of chemical compounds of biological importance have characterizing spectrographic lines only in the infra-red region, which no present instrument is now capable of detecting; hence, micro-chemical analysis is also forecast.

Perfection of mass x-ray techniques for discovering cancer—similar to those so successfully used in tuberculosis units—should put early detection of the disease on a practical basis for thousands of persons. Dr. Russell H. Morgan, professor of radiology, is putting such a small-film technique through its final year of tests at Johns Hopkins.

ALL doctors are particularly interested in the field of diagnosis, for the percentage of cures now possible through surgery and irradiation depends in large measure on the early detection of the malignancy. There is a constant search



Environmental factors in cancer—smoke, sun, dust—are being studied at the Johns Hopkins School of Hygiene and Public Health

for new and better methods of discovering the cancer in patients before acute symptoms are experienced.

Special studies in this field are being carried on by Dr. Curt P. Richter of the department of psychiatry. In the course of its development, an internal cancer may injure elements of the nervous system. When this happens, the nerve terminal at the surface of the skin associated with the affected nerve-chain will show abnormal behavior that can be detected by electrical measuring methods. Dr. Richter is pursuing studies with animals and has examined many cases of human cancer in order to determine how early in the life of a tumor its presence can positively be detected—and thus to establish a sound correlation between various kinds of tumors and skin phenomena.

One of the most valuable and reliable methods of detecting cancer, particularly that of the stomach and intestinal area, is the use of x-ray; but all too frequently, by the time the cancer is discovered by this means in the patient, it has progressed beyond the stage where it might be cured. Dr. Russell H. Morgan, professor of radiology, is conducting investigations along several lines, all designed to simplify the x-ray procedure and to encourage mass examinations throughout the population.

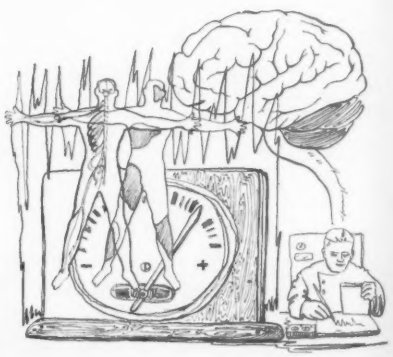
Under present methods, complete x-ray examinations on a mass basis are not practical. Patients must be prepared to spend two or three days in the course of the examinations, including periods of fasting and other special preparations. This fact alone discourages people from submitting to x-ray examination until they experience severe symptoms. In addition, the processing, reading, and storing of thousands upon thousands of standard-size x-ray films are not only expensive and impractical, but mass examinations of this kind might expose doctors and technicians to dangerous doses of x-rays.

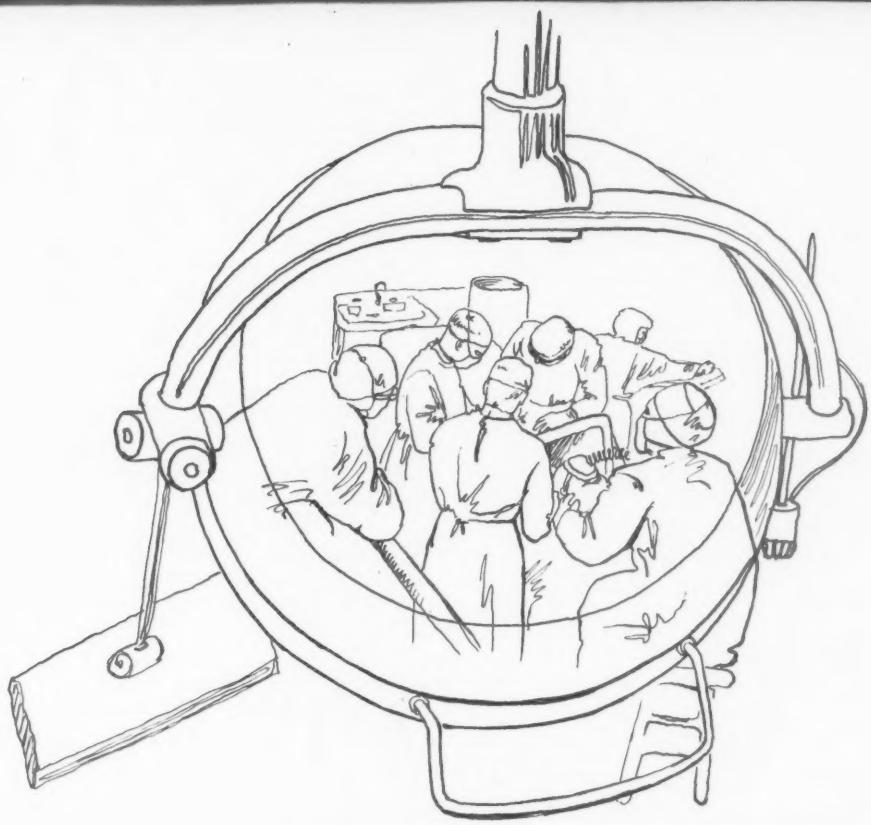
Dr. Morgan, together with Dr. Robert D. Sloan, of Hopkins, and Dr. John F. Roach, now professor of radiology at Albany, N. Y., School of Medicine, has developed a method whereby small-film photofluorographic methods, similar to those now used for mass-population chest x-ray examinations for early detection of tuberculosis, may be used in x-ray examination of the stomach. By adapting Schmidt optics—a photo principle involving the use of mirrors instead of lenses—the method makes it possible to obtain satisfactory miniature films of the stomach with little more radiation than that required for conventional x-ray. This method requires only six minutes of the patient's time. No fasting or other special advance preparations are necessary, and the patient does not have to undress. The small films can be developed and read rapidly, and cost only a fraction of those used in conventional examinations. A pilot study to determine the reliability of the method is now in its fourth year at Johns Hopkins and will be continued for another year.

Dr. Morgan and his associates have developed another type of machine whereby the x-ray fluoroscopic screen can be brightened from three hundred to three thousand times its normal visibility. This apparatus, although proved in demonstrations, is still under laboratory experiment for additional improvements, and is expected to be of tremendous new value in many fields of research, education, and clinical medicine.

IN the clinical field, the management and treatment of patients bring to a focus all the knowledge and ability to be found in the entire medical environment at Johns Hopkins. And it is here that the constant exchange of information among all members of the Hopkins medical institutions becomes another valuable weapon in the fight against cancer and all disease. Not only in the formal clinic and medical conference, but also in the corridors and over coffee cups, the knowledge of one man is transmitted quickly to the others, and new knowledge is rapidly available for the benefit of patients. Here, many of the men engaged in fundamental studies, in chemotherapeutic investigation, and in special research collaborate to gain a clinical evaluation of new medicines and procedures that appeared promising in the laboratory and in tests on animals.

As this article pointed out earlier, many types of cancer can be cured by





surgery and radiological treatment if diagnosis is made at an early stage of the disease. During the past five years, tremendous gains have been made in the development of new techniques in both fields. Through the skills of the surgeons and the development of new and more powerful apparatus for irradiation, many persons with cancer who would have been considered hopeless a relatively few years ago may now look forward to many years of happy and useful living.

IN the surgical treatment of cancer, Johns Hopkins men have been responsible for the development of many new techniques which have helped to increase the percentage of cures for various types of malignancy. Several of those pursuing special studies—particularly Dr. Scott in urology and Drs. TeLinde and Galvin in gynecology—have also done outstanding surgical work in their respective fields.

Others whose work in the field is well-known include Dr. Mark Ravitch, working with surgical treatment for polyposis of the colon, the forerunner of cancer in that area; Drs. Grant E. Ward and Milton Edgerton, who have developed new operations for radical neck dissection and removal of cancer of the mouth, and also a radical operation for cancer of the external auditory canal and middle ear; Dr. William F. Rienhoff, Jr., working with cancer of the lung; Drs. Samuel J. Crowe and Edwin N. Broyles, working with cancer of the larynx; Dr. I. Ridgeway Trimble, who performed one of the first one-stage operations for removal of cancer of the pancreas; and Drs. A. Earl Walker and Frank J. Otenasek, working with tumor of the brain.

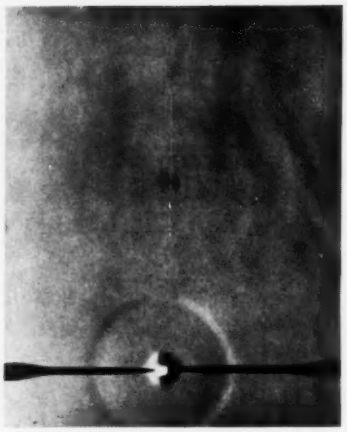
The use of ACTH in the treatment of leukemia has been the subject of clinical studies and observation by Dr. C. Lockard Conley, hematologist of the department of medicine. In several patients, treatment was followed by a remarkable, although temporary, remission of the disease.

In the field of environmental medicine, Dr. Anna M. Baetjer, of the School of Hygiene and Public Health, has been conducting studies of the effects of dusts, resulting from modern industrial processes, in relation to cancer of the lung.

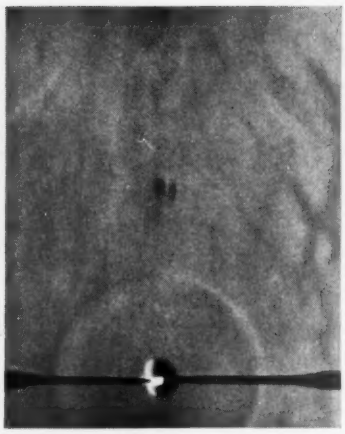
THIS account has but touched briefly on the work of those with particular interests in the field of cancer at Johns Hopkins, and space does not permit the listing of all those who at one time or another have made contributions of value in the cancer fight. Such a list would probably contain the name of nearly every member of the Hopkins staff.

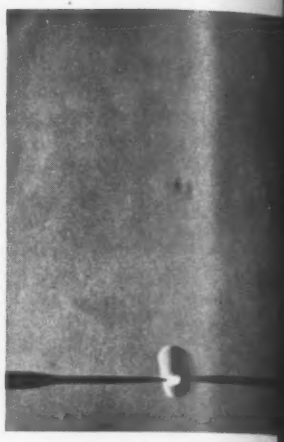
The annual cost of such research and treatment is large in dollars but small in relation to the terrible and widespread effects of cancer on the human race. The general public has contributed generously, through the national fund-raising organizations interested specifically in cancer; and support in the form of specific grants-in-aid for cancer research has been available from these and other private and government agencies. Medical scientists are agreed, however, that if all the promising leads produced by the various studies are to be adequately investigated—not only in cancer but in all research—the great need is for "free" funds, unhampered by restrictions to specific lines of approach. Lack of unrestricted funds at the command of the medical institutions has forced abandonment of many lines of research which held promise of producing new and valuable fundamental knowledge in the total battle against disease.

Thus the medical scientists agree that the fight against cancer and many other diseases will be won only through an unrestricted range of inquiry and research.



TO PRODUCE A FLAME, two pins were placed in a stream of hydrogen and a tiny spark passed between them. In second picture, the resulting flame is 5.8 millionths of a second old. Circle around globule of burning hydrogen is a shock wave produced by the spark.





9.1 MILLIONTHS of a second old (*left*), the flame kernel has grown in size. The shock wave has spread out and weakened, until it is now a sound wave. At right, flame is 29.8 millionths of a second old, and the sound wave is about to leave the gas stream.

Birth Of A Flame

Hopkins photographs record the early microseconds of its life

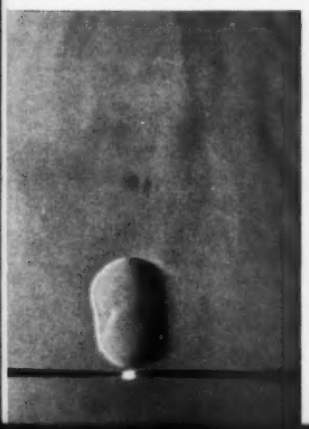
THE unusual pictures on these pages, made at the Johns Hopkins University's Applied Physics Laboratory, show how a flame is born. They trace its development from the age of 5.8 millionths of a second (*second photograph, above*) to the age of 1,112 millionths of a second (*opposite page*).

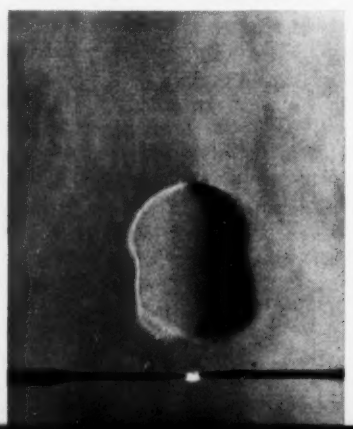
The flame was produced in a stream of hydrogen and air. Two common pins, like those used by a dressmaker, were etched to a small size and used as electrodes in the hydrogen-air stream. As a tiny spark was passed between them, the gas ignited.

Each combustion stage was photographed separately by use of a delay timer, which set off a Schlieren light source at desired microsecond intervals (millionths of a second) after the spark had been created. Because of the incredibly short period between the initial spark and the moment the Schlieren pictures were taken, the camera shutter had to be left open; therefore the spark appears in all pictures even though it lasted less than one microsecond. Camera fans will recognize the result as a double exposure: first the spark registered on the film, then the flame kernel, caught several microseconds later by the Schlieren light.

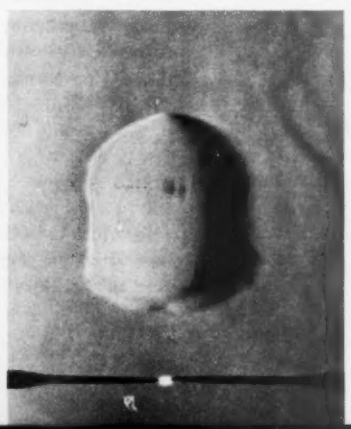
The Schlieren system is a method of rendering visible optical irregularities in transparent substances such as glass or gases. The Hopkins photographs were taken by APL staff members in connection with combustion studies, and are in use for studying the amount of energy necessary to ignite a flowing gas and to follow the combustion in minute detail.

GREATLY GROWN, the flame kernel at 238 millionths of a second after the original spark (*left*) and at 457 millionths (*right*) leaves the spark gap and begins to move along in the stream of gas.

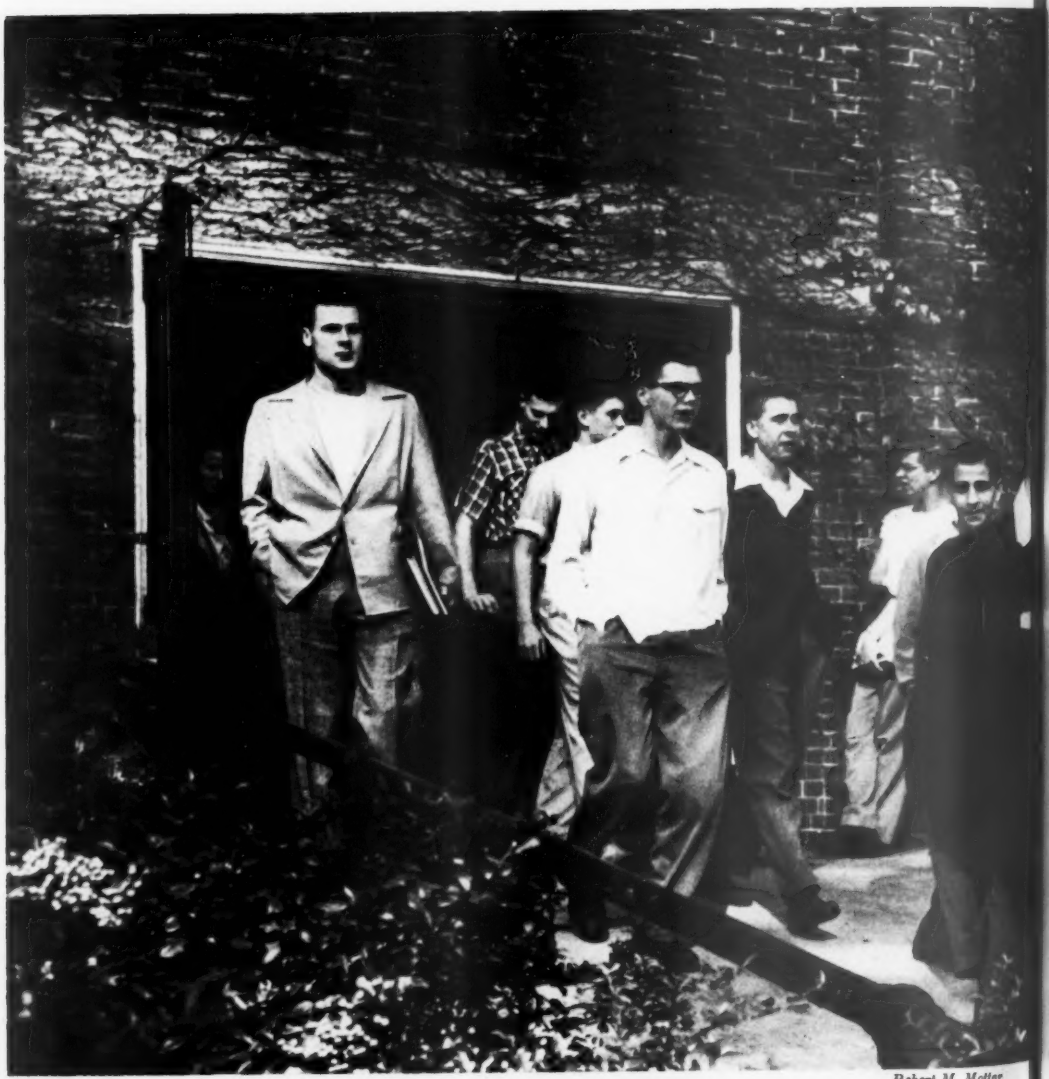




IN MIDSTREAM, flame kernel rapidly expands: left, at 675 millionths of a second; right, at 894. At last (*opposite page*) it spreads to turbulent sides of the stream and is broken up.



WHITHER THE DRAFTABLE C



Robert M. Motter

Hopkins students—and their contemporaries countrywide—
are plagued with questions in these times of uncertainty

LE COLLEGE MAN?

By WILLIAM ZARTMAN (1-A)

What effect is the current military situation, with its accompanying draft of young men, having upon university students? The Johns Hopkins Magazine asked William Zartman, managing editor of the News-Letter (the undergraduate newspaper), to tell the story of student thinking as he saw it, and to pull no punches in the telling. The accompanying report is his view of what has been, to say the least, a trying year for the university man.

THIS year's Hopkins yearbook might well be called *Quo Vadis* instead of *Hullabaloo*. Not that the traditional fanfare and flamboyance of exuberant seniors is gone, but it has no direction. It is not the final fling of a student ending his life in a splurge of gaiety and girls, ready to face a more steady, serious life in business or in graduate school; it is rather the farewell party of a man caught in a cabin in a sandstorm. He knows he must go; there is no reprieve. Yet above all he thinks: Where are we going? Do we have a chance and how long? Can we go into grad school, law school, business—and how soon? Can we finish Hopkins? We all knew that, ultimately, when the roll was called out yonder, we'd be there. The war was a fine thing; blast the dirty Reds. But we had a very natural, unpatriotic hope that we wouldn't find that "lo, the Hopkins student's name led all the rest." For we loved not so much our fellow men; we loved our own existence, and we fervently wondered, Quo Vadis?

Nor is this '42. There is little chance that the classes of the fifties will do what is said to have happened in the early forties: split the treasury among the few remaining members of the class and take a week in Florida. Treasuries in the fifties won't be big enough; classes won't be small enough; and we today want desperately to finish rather than to leave.

We are neither wild nor weak-kneed. There is no hysteria, no violent pessimism. As school draws to a close, the main feeling that we have on the subject—and usually our lives run on, conscious but unmindful of any military spectre—is one that looks through this lack of direction and, aware but not preoccupied, serious but not without humor, determines a personal purpose in the absence of a general one, and acts on that. We are not cowards; if our names are called, we will not run. There will be a pang of terror, a nervous shrug, and then a khaki uniform. If it is inevitable we are prepared to accept it. But we apply interrogatives as to its actual coming.

And we no longer worry: our fathers and the registrar do that.

WHEN we arrived to register last September 25, the ubiquitous feeling was one of "What's going on?" The nation had asserted itself as the defender of the little man; we had thought we would lick the hell out of his oppressors and go home again, without having to convert any plowshares. But things had not turned out like that. The younger of us could remember when our active participation in a war consisted of pinning flags on a mapboard of Germany; by September, though we had learned to pronounce Korean names, we could not quite imagine leaving home to do what our neighbors and big brothers had done. There were others, of course, older men and veterans, who mingled with the younger students; they had little to say. The first gripes came from those vets who had been in a short time and were faced with going back first.

On the whole, the outlook was cold and sensible. We didn't want to go. So students flocked to the Reserve units, National Guard, and the ROTC. The latter swelled to include one of the largest contingents in the school's history. Thirty-five ROTC students remained in the senior class, and they were the most dubious. An Army captain warned, "If the situation as it is today still exists in June, it is very possible that this year's senior-class cadets will be called to active duty upon graduation." It was hard to look to 1952, or 1953, or farther; but June, 1951 was not too far off. There was still hope, but it rose and fell barometrically with the progress up and down the peninsula in Asia.

The eighty-five-man enrollment in third-year ROTC marked the entrance

of some of the veterans seeking a deferment their prior service could not give. Also in this group were many juniors who would not have continued into the more stringent part of the college reserve had not the crisis appeared.

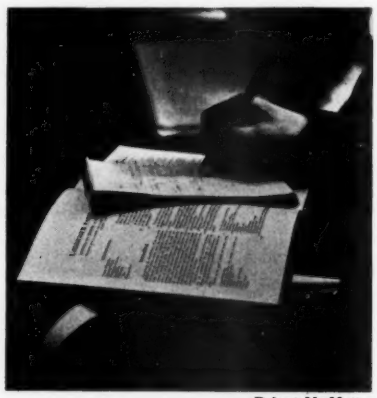
The number of sophomores in the ranks swelled to an even hundred. But the most noticeable rise was in the freshman class. A good proportion of the 437 first-year men were either too young or too old to worry; but the two hundred freshmen who joined the ROTC represented almost all the draftable newcomers. The frosh had responded well to the *News-Letter* headline, "ROTC Again Will Defer Students." Almost Faust-like, it was the immediacy which demanded everything. No one knew what was to happen; but whatever, we wanted to be safe, we didn't want to go.

AND too close to us the lightning had struck. The very paper which carried the ROTC story also announced that two of the faculty had gone. Three days later the blow hit in the same spot, a tender spot by now. The class of '53 lost its president, Jim Phinney, to an army training camp; Phinney had stopped being educated in order to teach his World War II experiences to trainees in Texas. It seemed that the ROTC and Reserve lightning rods were not enough. The war was coming close to home.

On October 10, the first of the weekly communiques arrived from the registrar's office. This presented a strange paradox. Here, we came to realize, was one place which knew the answers. Of all the military and civilian bureaucracy which administered the fatal draft, Remsen Hall held the only office which took a sympathetic look at our interests, which weeded the meat from the "whereases".

It would therefore seem that this would buoy the student spirits. But it did not, and for two reasons. First, in the distrust of the whole selective-service system, we still viewed the Remsen communiques with misgivings. And second, the communiques, while clear, were pessimistic. The first part of the first message showed how the dread symbol 1-A could be changed by some astute maneuvering and an official University letter into the mystic 1-AP. But despite the fervent activity of the registrar, which did engender a slow spirit of confidence in the office, the final say rested with the local boards, and we were back where we started. The law made us safe for a year, but when the new draft cards came back with the 1-A unchanged, the one-year draft deferment seemed empty.

And so, as the first month of school progressed, the feeling of confusedness gave way to a vacuousness, preparatory to pessimism. In the first editorial the student newspaper carried on the subject, *News-Letter* editor William Trombley wrote, "An amazing feature of the 1950 Hopkins campus is the 'come-what-will' attitude maintained by the majority of students toward the draft." We were baffled; there was nothing even as positive as the furrowed brows or weepy pessimism of World War II. By the middle of the month, however, the enlistment question was raised. Students started furtively peeking through their mailbox windows for signs of an official-looking letter, so that they could rush to the recruiting sergeant at Baltimore and Liberty Streets before legally getting the dread draft summons.



Robert M. Mottar

BY December we had turned bitter. The weeks before the Christmas holidays provided two antithetical feelings. There was no longer the avid reading of the war news; even the Baltimore *Sunpapers* thought other stories were more important. We tried to show a little resiliency and laugh; but, though clever, the laugh was bitter.

It came in three instalments. The cover of the campus humor magazine, the *Jaywalker*, appeared with a humorous poke at the whole system. While the Recruiting Officer stood chewing a toothpick, an ROTC cadet shined his shoes, a college student pleaded and wept large tears, and from under a cloud marked "Draft" the Jaybird appeared with a determined frown on his face and a money bag in each hand. One overzealous old graduate saw this and noted, horrified, "Now I ask you, what does this suggest? Definite traces of communism!" He didn't understand. It was all in fun, but it was true. While no one seriously thought of buying out some local official, several friendly congressmen were being sought after for choice appointments; we were approaching desperation.

It was the ROTC which took it on the chin. That same issue of the *Jaywalker* contained a clever condemnation by undergrad Ed Seeger of one of the Army's efforts. A comic book, loftily entitled "Time for Decision," was handed out to all freshmen. "Ted Wright," a neurotic young man about town, doesn't "have what it takes to step up and introduce himself." So he joins the ROTC and "finds something that changes his whole life," gets him a job, a woman, a purpose, a uniform, and a great big horse-laugh from the campus.

The *News-Letter* administered another telling punch to the student reserve. In a banner story entitled "This is the ROTC, Mr. Jay," it slung journalistic sneers at the men who on Monday afternoons, "like Clark Kent into Superman, become an officer and a gentleman on campus by an Act of Congress." Quipped campus poet Sol Golomb,

Is your colonel too infernal?
What's your stand on "gigs" and "pips"?
Do you like the comic journal?
Do you think the "Joes" are drips?
Well, no reason to get panicky.
For, as expressed with elegance
In the Encylopedia Brittanica,
There's three types of intelligence—
Human, animal, and military!

The final *coup-de-grace* was administered by the proclamations of Johnny-Come-Marching-Home Lt. Thomas Collins, former cadet colonel of the ROTC, who announced, "Some of you fellows are going to laugh . . . but to tell the truth, army life is just like the continuation of your fraternity life." We laughed.

WHAT did these laughs reflect? Humorous though they were, they represented a bitter reaction. We were trying to avoid the Army as long as possible: don't trouble khaki 'til khaki troubles you. And yet here it was, all over the place, flaunting its brass and regimenting an institution which is

Continued on Page 30

CO-CAPTAIN BYRON FORBUSH (JERSEY NO. 47) WAS ATTACKMAN ON JOHNS HOPKINS' 1951 LACROSSE TEAM

Lacrosse Co-Captain

Photographs by Robert M. Mottar

SURROUNDED BY FANS, Byron and his co-captain, Goalie Joe Sollers, leave lacrosse field after winning Loyola College game.

The story of Byron Forbush exemplifies Hopkins sports

WHEN Byron Forbush, co-captain of Johns Hopkins' 1951 lacrosse team, hung up his uniform after the Mount Washington game last month, he was closing out his intercollegiate athletic career. This month, standing high in his class, Byron receives his B. A. from Hopkins; and in a few weeks he will enter the Harvard Graduate School of Education, where he has won a scholarship leading to the degree of Master of Arts in Teaching.

The pictures on these pages show what it is like to be captain of a varsity team at the University. It is—as would be the story of every Hopkins athlete—a story of how, under Hopkins' somewhat unusual sports philosophy, even one of the top varsity players must be a student first, an athlete second; how, while playing hard, he must keep his academic standing up to the high level which Johns Hopkins demands.

Byron is a "BMOC" who doesn't act like one

Byron, who is twenty-one years old, is majoring in history at Hopkins. When he has obtained his master's degree at Harvard (a process which he expects will take this summer and the year following), he hopes to teach history in secondary schools —with perhaps some athletic coaching on the side.

Meanwhile, he is hard at work achieving his immediate objective: the Bachelor of Arts degree at Hopkins this month. In addition to his studies and his lacrosse, Byron holds down the presidency of his class (an office which he occupied during his junior year, also); serves on the Cotillion Board, a group which governs social activities at Hopkins; is president of the H Club, an organization of Hopkins lettermen; and is on the AA Board, a committee composed of the captains of all the University's athletic teams. Although, as this list of attainments attests, he is a "big man on campus," his classmates agree that Byron, an exceedingly modest individual, acts less like a traditional "BMOC" than almost anyone else at Hopkins.

BYRON STARTS the morning in the Homewood library. Above, with two colleagues, he talks over an assignment in Reformation History class.

AS PRESIDENT OF HIS CLASS, Byron stops in to talk with close friend, and student newspaper editor Bill Trombley.

BACK TO THE LIBRARY, he puts in more hours of research preparing for end-of-term papers. A history major, he maintains a B average.

IN HISTORY OF ART class, Byron takes notes as Dr. R. H. Howland lectures on slide photographs of 19th century paintings.

OVER LUNCH in the crowded University cafeteria, he relaxes and talks lacrosse with teammates, who often gather at the same table.

LACROSSE PRACTICE lasts two hours every afternoon, but twice a week he must leave practice early to make a late class.

WEEKDAY EVENINGS, Byron studies in his Baltimore home. For his activities during a lacrosse game, see the following pages.

BEFORE THE SEASON'S FIRST GAME, Byron and the rest of the Hopkins lacrosse team warm up. As co-captain, Byron has worked closely with Coach Fred Smith in determining the makeup of the team, and throughout the season will cooperate with him in deciding which players should go on out-of-town trips when travel budget is too limited to accommodate everybody.

IN THE LOCKER-ROOM, team members get last-minute pep-talk and instructions from Coach Fred Smith (in rear). Real preparations

BEFORE STARTING WHISTLE BLOWS, TEAM HAS LAST HUDDLE WITH COACH SMITH

WHEN REST OF TEAM has trotted onto field, → Smith gives co-captains a final warm handshake.

for the day's opponent, Princeton, have been made at practices earlier in the week; this is mainly a morale session to quiet on-edge nerves.

AFTER FINAL BRIEFING, Byron and Co-Captain Joe Sollers (*left*) lead the team from locker-room, past members of opposition Princeton squad and television trailer (*top left corner*). Coming onto field, players will trot between double line of cheering Hopkins students, who are awaiting their arrival. Princeton snapped Hopkins' four-year winning streak, 13 to 11.

Lacrosse is a rugged game, and Byron is a master of it

As the pictures on this and the opposite page show, Byron Forbush is an extraordinarily skillful exponent of the attack in lacrosse, which, even of less-polished players than he, demands great aggressiveness and mastery of technique.

Lacrosse, played long ago by the Indians and today the national pastime of Canada, has, despite its attractions both as a fine spectator sport and as an ideal springtime counterpart of football as a bodily-contact game, been slow to spread in the United States beyond the Middle Atlantic region. Now, however, more and more colleges and universities are adding it to their spring schedules as word of its worth gets around.

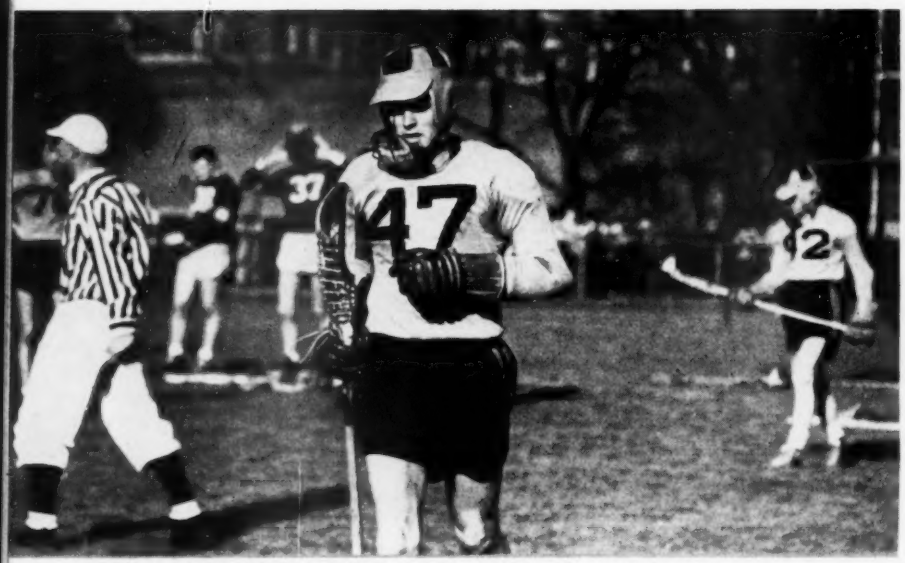
Under guard by the Loyola defenseman, Byron (47) starts around back of goal, carrying stick backhanded to protect it from attack.

As the defenseman closes in, Byron swings closer to goal, looking for clear space to dodge forward into shooting position.

Byron pivots with ball behind goal, playing for time. He will feed ball to Hopkins player now working into position in front of goal.

Under close check himself, Byron passes ball to player on other side of goal. He then moves for a clear shooting position.

He catches return pass (left) and shoots. Ball to upper right of press box (above) has rebounded from Loyola goalie's body.



WITH GAME NEARLY OVER, Byron and other veterans leave field to younger players. Forbush, an all-around athlete, was also captain of this year's Hopkins basketball team.

RESTING ON BENCH, Byron studies play with eye to coaching suggestions.

AT LACROSSE ALUMNI PARTY co-captains Sollers and Forbush were seated together. Mugs on table were given as souvenirs; team members drank no beer, left at 9:15 to rest for next day's game.

BOARDING BUS for Virginia game, Byron (whom team had been razzing about photographer) clowned for camera with traditional hero's salute. Team obliged with applause.

Byron Forbush fits well into Hopkins' sports philosophy

Byron Forbush and Co-Captain Joe Sollers were the sole holdovers from last season on Hopkins' 1951 lacrosse team, and thus their roles as "spark-plugs" for the team were especially important. For a relatively green outfit, following close on the heels of a long-time national-championship team, the 1951 record of four wins (over Loyola, Virginia, Army, and Navy) and four losses (to Princeton, Duke, Maryland, and the Mount Washington Club) was, despite the natural disappointment over relinquishing a four-year crown, rather remarkable.

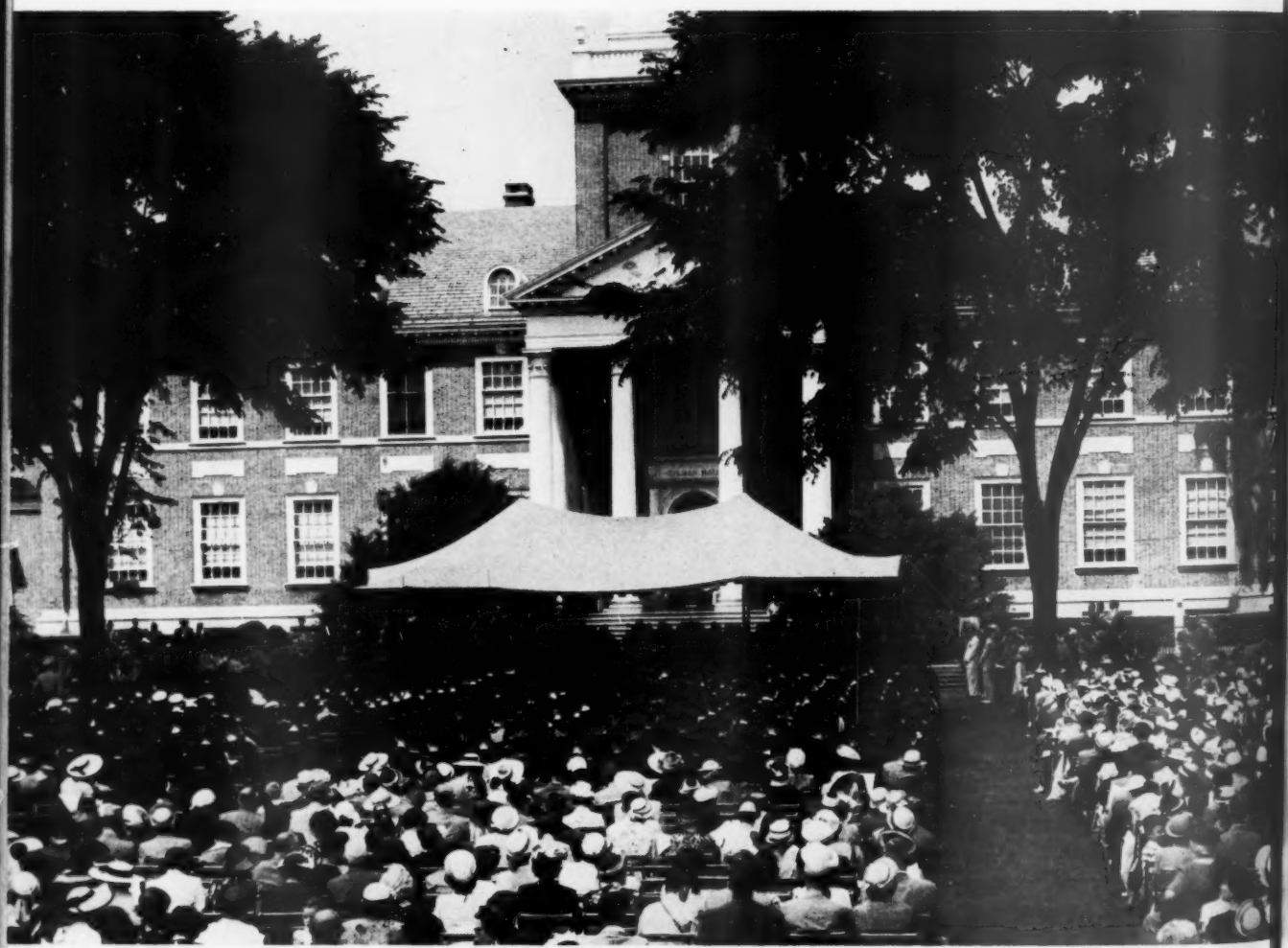
The sports philosophy which produced it is unique. With high finance figuring prominently—and sometimes uglily—in many intercollegiate sports circles, Johns Hopkins does not even charge an admission fee at home games. No financial guarantees are given or asked. When a Hopkins team travels to other schools, the University pays its way; visitors to Hopkins pay theirs. Athletic scholarships are unknown; there is no such thing as a "snap course" for a varsity star. The school is not in business to run a big sports sideshow, and through these measures, it makes its attitude clear.

The result, as the story of Byron Forbush shows, is an athletic program for all students—a program which introduces Hopkins men to all sports, develops their physical skills, and insists that its participants be top-notch scholars, too.

CO-CAPTAINS SOLLERS AND FORBUSH WATCH END OF GAME →

NEWS at Johns Hopkins

A digest of developments at the University and Hospital in recent weeks



J.H.U. Illustrations Division

COMMENCEMENT (ABOVE, THE 1950 EXERCISES) IS SCHEDULED FOR THIS MONTH ON GILMAN HALL QUADRANGLE

NORMALLY, in June, the thoughts of university students turn to summer vacations and commencements and graduate schools and job-hunting. But this year is different. This year, there is the war and the draft.

As they finished their final exams early this month, most students were still uncertain about where they would be in a month, let alone in three months, from now. Many of them had taken tests sponsored by Selective Service, which would be a guide for their draft boards in deciding whether they should be permitted to continue their schooling or not; others were members of Reserve units; others hoped to be able to get to graduate schools in the fall. Some had been snatched up by industry.

But nearly all were uncertain about what the future held. And (*see Page 12*) their uncertainty created an atmosphere in which study was not always best achieved—at a time, undoubtedly, when intellectual development is at least as urgently needed in man's struggle to defend freedom as the development of arms and armies is.

First Bowman Lecture

Established in honor of the late president of the University by Archer M. Huntington and administered by the American Geographical Society, the first Isaiah Bowman Memorial Lecture was delivered at Johns Hopkins last month by Dr. Charles Seymour, president emeritus of Yale.

Speaking on "Geography, Justice, and Politics at the Peace Conference of 1919," Dr. Seymour traced the beginnings of today's crisis to decisions made at the Paris Conference. For lack of wisdom "manifest whenever men get together to make a peace settlement," Dr. Seymour said, succeeding generations always pay the price.

The Faculty

● *Among members of the Boards of Trustees*, John J. McCloy has been awarded an honorary Doctor of Laws degree by the University of Maryland.

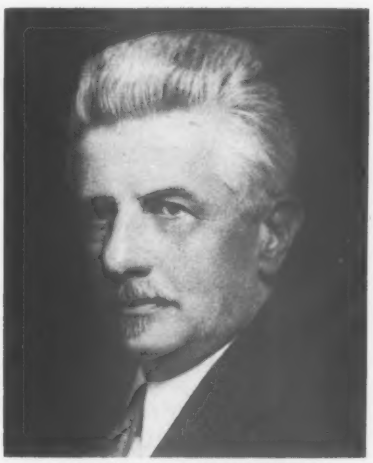
William L. Galvin received an honorary Doctor of Laws degree from Catholic University.

● *President Detlev W. Bronk* recently presided at the annual meeting of the National Academy of Sciences, of which he is president. He attended the Cleveland meetings of the American Physiological Society and spoke at dinners of the Industrial Research Institute and of the Associated Food and Container Institute.

He delivered three commencement addresses this month: at the University's

ALEXANDER G. CHRISTIE

RAYMOND D. HAVENS



ARTHUR O. LOVEJOY

JOHN B. WHITEHEAD

Honorary Degrees

Five Johns Hopkins professors emeriti are receiving honorary degrees from the University at the Seventy-Fifth Anniversary commencement exercises this month. Dr. Christie is research professor and professor emeritus of mechanical engineering; Dr. Havens is research professor and professor emeritus of English; Dr. Lovejoy is professor emeritus of philosophy; Dr. Whitehead is professor emeritus of electrical engineering; and Dr. Wood is research professor and professor emeritus of physics.

Picture credits: Top left and center, Greystone Studios; top right, Bachrach; left, Greystone-Central News; right, Kaiden-Keystone.

ROBERT W. WOOD

School of Advanced International Studies; at Grinnell College, Iowa, where he received the honorary degree of Doctor of Laws; and at the University of Cincinnati, where he received the honorary degree of Doctor of Engineering. He was awarded the honorary degrees of Doctor of Literature at Tufts College and of Doctor of Science at Williams College.

On June 22 Dr. Bronk and President Truman were scheduled to speak at the dedication of the cornerstone of the new Clinical Center at the National Institutes of Health, Bethesda, Maryland.

● *In the Faculty of Philosophy*, David M. Robinson, professor emeritus of art and archaeology, has been awarded an honorary degree of Doctor of Philosophy by the University of Thessalonica in Greece.

Richard H. Howland, assistant professor of art, will spend the summer in Athens, completing a catalogue of the Greek lamps excavated from the Agora.

Vincent G. Dethier, associate professor of biology, will go to Amsterdam in August to present a paper at a physiological symposium at the International Entomological Congress.

E. Emmet Reid, professor emeritus of chemistry, was recently honored by the Hercules Powder Company for having served twenty-five years as consultant with the company.

James W. Poultney, assistant professor of classics, will spend the summer studying classical monuments in Italy, Greece, and other European countries.

J. D. H. Donnay, professor of crystallography and mineralogy, will be a United States delegate to the Second International Congress of Crystallography in Stockholm this month.

John M. Stephens, professor of education and of psychology, will give two courses at the University of British Columbia during the summer.

Earl R. Wasserman, associate professor of English, will conduct courses in Eighteenth Century literature at the University of Wisconsin.

Arno Schirokauer, professor of German, is spending this month in Germany, lecturing at the Universities of Munich and of Tübingen.

Sidney Painter, professor of history, will be a delegate to the meetings of the Anglo-American Historical Congress in London.

Hans W. Gatzke has been promoted to associate professor of history.

George Boas, professor of the history of philosophy, made the commencement address at the University of New Mexico and was awarded an honorary degree of Doctor of Laws.

ALBERT D. HUTZLER has been elected to the Board of Trustees of the Johns Hopkins University. A prominent Baltimore civic leader, Mr. Hutzler has been president and general manager of Hutzler Brothers Company since 1919. He received a bachelor of arts degree from Hopkins in 1908, is a member of the University's Political Economy Club, and is vice-president of the Friends of the Johns Hopkins Library.

Fritz Machlup, professor of political economy, is teaching this month at the Hebrew University in Jerusalem.

G. Wilson Shaffer, professor of psychology and dean of the Homewood Schools, will lecture and conduct seminars this summer at Northwestern University.

Pedro Salinas, professor of Romance languages, recently went to Havana to give a lecture series and attend a performance of his play, "Judit Y El Tirano." He will spend the summer at the University of California.

Emile Malakis, professor of Romance languages, Anna G. Hatcher, associate professor, and James C. McLaren, instructor, will spend the summer carrying out research work in Paris.

Elliott Coleman, associate professor of English writing, will teach creative writing and contemporary criticism this summer at Harvard.

N. Bryllion Fagin, associate professor of English and drama, will be at New York University.

● *At the School of Hygiene and Public Health*, John C. Hume, associate professor of public health administration, will go to Haiti in September as specia consultant to the World Health Organ ization and the Pan American Sanitary Bureau.

Paul V. Lemkau, associate professor of public health administration, is in Yugoslavia on a six-week survey of mental health facilities at the request of that government and under the sponsorship of the World Health Organization.

Kenneth F. Maxcy, professor of epidemiology, will travel this summer in Finland, Sweden, and London, and attend the Second International Poliomyelitis Congress in Copenhagen. Dr. Maxcy is scientific consultant of the International Health Division, the Rockefeller Foundation.

● *In the School of Engineering*, Stanley Corrsin has been promoted to associate professor of aeronautics.

Alexander G. Christie, research professor and professor emeritus of mechanical engineering, will go to Japan next month as a member of a twelve-man commission to study and report on conditions in Japanese engineering schools for the Supreme Commander for the Allied Powers.

James F. Bell, assistant professor of mechanical engineering, will lecture this summer at the University of Virginia.

Charles E. Renn has been promoted to professor of sanitary engineering.

● *At the School of Medicine*, Donald F. Proctor has been appointed professor of anesthesiology and anesthesiologist-in-charge at the Hospital. He had been associate professor of otolaryngology since 1946.

Richard H. Shryock, professor of the history of medicine, delivered a paper at the Congress on Medical Education at Lima, Peru, in connection with the celebration of the four hundredth anniversary of San Marcos. Dr. Shryock was also recently elected a secretary of the American Philosophical Society.

Samuel J. Crowe, adjunct professor of laryngology and otology, is giving clinical instruction to Air Force and Army medical officers in the U. S. Occupation Zone in Germany.

John Eager Howard, associate professor of medicine, is acting as exchange professor at Guy's Hospital, London.

E. Cowles Andrus, associate professor of medicine, has been elected president of the Heart Association of Maryland.

David Grob, instructor in medicine, is spending a month at laboratories in Porton and London on a U. S. government project.

Robert A. Hingson, associate pro-

fessor of obstetrics, has been appointed professor of anesthesia at the Western Reserve School of Medicine.

Arnold R. Rich, professor of pathology, will spend August and September in France and Switzerland. He will give addresses before the International Congress of Allergists in Zurich and the Dutch Association of Allergists.

Perrin H. Long, professor of preventive medicine, has been designated a knight in the French Legion of Honor. He was cited for the "outstanding service which he rendered to the Allied cause, and especially to the people of France, during two world wars" and for his "work in the fields of research, which has proved so beneficial to the progress of medical science." Dr. Long will leave Hopkins in September to become executive officer of preventive medicine in the College of Medicine of the State University of New York, supervising the research and teaching in the college and affiliated hospitals.

Emanuel B. Schoenbach, associate professor of preventive medicine and assistant professor of medicine, will leave Hopkins to take the post of chairman of the department of medicine at Maimonides Hospital, one of five teaching hospitals connected with the College of Medicine of the State University of New York.

Eleanor A. Bliss, assistant professor of preventive medicine, will attend the First International Congress of Clinical Pathology in London in July. She will deliver one of the opening papers at the session on laboratory control of chemotherapy.

Theodore Lidz, associate professor of psychiatry, has been appointed professor of psychiatry at Yale University Medical School.

Hans Loewald, instructor in psychiatry, is in Amsterdam for the International Psychoanalytical Congress.

Alfred Blalock, professor of surgery, has been awarded an honorary degree of Doctor of Science by the University of Rochester.

Richard J. Bing, associate professor of surgery, has been given a Fulbright award by the U. S. State Department to lecture at the University of Paris and at London University. He will deliver several papers on coronary circulation and cardiac metabolism in cardiac failure, and congenital heart disease.

Amos Koontz, assistant professor of surgery, will participate in the September meeting of the International Society of Surgery in Paris.

William W. Scott, professor of urology, is acting as exchange professor at Guy's Hospital in London.

● *At the Welch Medical Library*, Dr. Sanford V. Larkey, director, has been reelected chairman of the Council of the National Library Associations.

● *In the School of Nursing*, Miss Margaret E. Courtney has been appointed assistant director of the school. She has been instructor and supervisor of medical nursing at Hopkins.

● *At the Applied Physics Laboratory*, Albert M. Stone has been elected chairman of the communications committee of the Washington Philosophical Society.

New members of the staff include Angus C. Tregidga, formerly of Motorola, Inc., and Anthony J. Wilk, of Cornell.

Robert G. Spence has transferred to APL from the University's Institute for Cooperative Research.

Jack Engeman

EDWIN L. CROSBY, director of the Hospital, speaks at commencement exercises before awarding diplomas to this year's forty-eight graduates of the Johns Hopkins School of Nursing. The commencement address was made by Dr. Leo W. Simmons, of Cornell University.

Jack Engeman

MISS ELSIE M. LAWLER and Mrs. Helen S. W. Athey with Miss Anna D. Wolf at dedication ceremonies of the new educational unit of the School of Nursing. Rooms in the unit were dedicated in honor of Miss Lawler, class of 1899 and superintendent of the School for thirty years, and Mrs. Athey, of the class of 1905. Miss Wolf is present director of the school.

Alumni Meetings

Lacrosse alumni gave a dinner for Johns Hopkins' 1951 lacrosse team on Tuesday, June 5. Members of the 1932 team presented the Turnbull-Reynolds Award to George Keller, adjudged the player "best exemplifying the good sportsmanship on and off the field of Jack Turnbull [B. E. '32; attackman and captain of his Johns Hopkins team; captain of the United States lacrosse team at the Olympic Games in 1932; and a participant in the Berlin Olympics of 1936, who was lost while piloting his bomber over Germany in 1944] and Pete Reynolds ['30–'35, engineering; attackman on his Hopkins team and Olympic star, who died on a Japanese prison ship in 1944]." The Penniman Award for outstanding midfielder, given in memory of George

Jack Engeman

FEATURE OF HOMECOMING DAY WAS PARADE OF CLASSES ON HOMEWOOD FIELD BEFORE PRINCETON GAME

Penniman, B.S. (Econ.) '41, Johns Hopkins midfielder, who was killed in service in 1944, was presented to Dick Tucker. The Erlanger Award, given by the Johns Hopkins Club of New York to the "most valuable senior on the team" in memory of Sidney Erlanger, B.A. '04, a charter member of the club and outstanding Johns Hopkins goalie, was presented to Goalie Joe Sollers. At the dinner, Robert H. Scott was elected captain of the 1952 lacrosse team, and varsity letters were awarded to players who had earned them in the 1951 season.

Alumni in the Buffalo, N. Y. area scheduled an organizational meeting for Thursday, June 7, at the Buffalo Athletic Club. Robert M. Milton was acting chairman.

The Johns Hopkins Engineers, at their annual dinner last month, elected Lorne R. Guild, president; Kent R Mullikin, vice president; and Louis V. Koerber, secretary.

The Johns Hopkins Club, Baltimore, last month met for buffet supper and heard Dr. Charles H. Behre, Jr., professor of economic geology at Columbia, give an illustrated lecture, "Geologists in Striped Trousers: Contrasting Reactions to Current Problems in Mexico, Burma, and Haiti."

The Alumni

Five Johns Hopkins alumni presented papers before the annual meeting of the National Academy of Sciences held in Washington in April:

William H. Taliaferro, Ph.D. '18 (Zool.), fac. '19–'24, and Lucy Graves Taliaferro, Sc.D. in Hyg. '25: "Role of the Spleen and Nonsplenic Sites in Antibody Formation";

Warren H. Lewis, M.D. '00, fac. '00–'40: "Locomotion of *Chaos chaos*, the Giant Ameba";

Wendell P. Woodring, Ph.D. '16 (Geol.): "Basic Assumption Underlying Paleoecology";

Lyman J. Briggs, Ph.D. '01 (Physics): "The Limiting Negative Pressure of Five Organic Liquids and the Two-Phase System, Water-Ice".

Paul B. Dunbar, Ph.D. '07, has retired as U. S. Commissioner of Food and Drugs after forty-four years in government service.

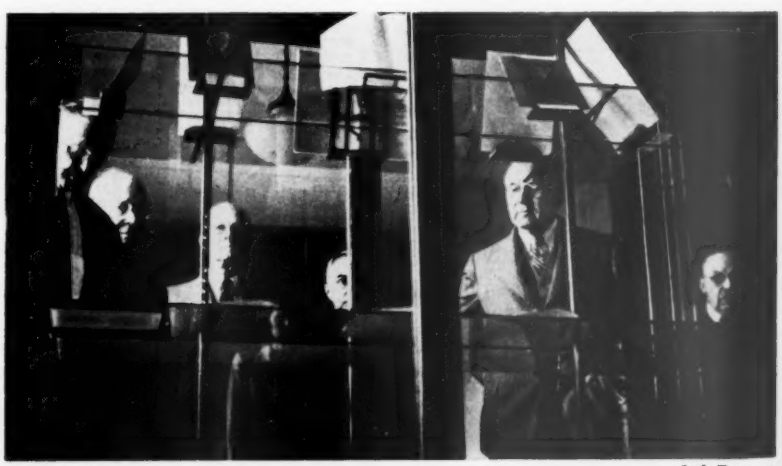
Herbert E. Ives, Ph.D. '08 (Physics), has been awarded the Rumford Premium for 1951 in recognition of important discoveries in heat and light.

Herbert McLean Evans, M.D. '08, fac. '08–'15, and Karl Spencer Lashley, Ph.D. '14 (Zool.), fel. '14–'17, '19–'20, have been elected to the Royal Society of Great Britain.

Charles P. McCormick, '15–'18 (Arts), for the third successive year is acting as the employer delegate for the United States at the International Labor Organization conference in Switzerland.

Gilbert Chinard, fac. '19–'36, has been named Commander in the French Legion of Honor in recognition of his work in the field of Franco-American cultural relations, especially in literature and philosophical and political thought.

Charles G. Lord, '23–'26 (Arts), has



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MEMBERS OF THE MEDICAL SCHOOL CLASS OF 1901 AT HOMECOMING

been made a general partner of Baker, Watts and Company.

Howard B. Andervont, Sc.D. in Hyg. '26, fac. '23–'26, has been elected to the Board of Scientific Directors of the Roscoe B. Jackson Memorial Library.

Louis B. Flexner, M.D. '27, fel. '27–'28, fac. '28–'40, has been named professor of anatomy and head of the anatomy department at the University of Pennsylvania School of Medicine.

Lucile Petry, School of Nursing '27, Assistant Surgeon General of the U. S. Public Health Service, is receiving the honorary degree of Doctor of Science at Boston University's commencement exercises this month.

Frederick S. Dunn, Ph.D. '28 (Pol. Sci.), has been named director of the new Center of International Studies at Princeton University. Dr. Dunn had been for the last ten years director of the Institute of International Studies at Yale University.

Vernon E. Scheid, B.A. '28, Ph.D. '46 (Geol.), has been appointed director of the Nevada Bureau of Mines.

G. Pierce Daiger, B.E. '29, Dr. Eng. '32, has been promoted to executive assistant of the Hoover Company.

Richard G. Stone, Ph.D. '32 (Pol. Econ.), was commencement speaker at Western Maryland College where he received an honorary degree of Doctor of Humane Letters.

Clarence Dennis, M.D. '35, has been appointed director of the division of general surgery at the new State University of New York.

Edward D. DeLamater, M.A. '37 (Bot.), has been appointed professor of microbiology and research professor of dermatology at the University of Pennsylvania School of Medicine.

Bascom Johnson, Jr., M.P.H. '39, has been named chief of professional services at the new Veterans Administration Hospital in Denver.

Minot P. Fryer, M.D. '40, has been promoted to assistant professor of clinical surgery at Washington University.

Virgil C. Scott, fac. '41–'45, has been promoted to associate professor of medicine and of preventive medicine at Washington University.

Andrew H. Clark, fac. '43–'44, has been made professor of geography at the University of Wisconsin.

Clark E. Bricker, fac. '46–'48, has been promoted to associate professor of chemistry at Princeton.

Richard P. Thomsen, M.A. '48 (Educ.), has been named headmaster

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of Episcopal High School, Alexandria, Virginia.

William F. Nugent, M.A. '50 (Hist.), has been made director of the Bureau of Appointments at the Johns Hopkins University.

Henry Allen Moe, LL.D. (hon.) '51, has been elected a councillor of the American Philosophical Society.

Deaths

(Dates are 1951, unless otherwise noted.)

Florence I. Arnold, B.S. '30, May 3.

Francis Russell Bichowsky, fac. '24–'27, O.R.O. staff '48–'51, April 4.

Abraham Cohen, B.A. '91, Ph.D. '94, professor emeritus of mathematics, April 25.

John F. Cremen, B.A. '05, M.A. '09 (Pol. Sci.), April 12.

Charles Dudley Eareckson, '48–'51, May 27.

John S. Fischer, B.A. '98, g. '98–'99 (Biol.), M.D. '03, June 2.

Henry Stewart Gane, Ph.D. '95 (Geol.), March 26.

J. Gaston Gay, M.D. '23, January 21.

John Claxton Gittings, fac. '30–'33, '39–'46, March 8, 1950.

Arthur H. Griswold, M.D. '06, February 25.

William Edward Grove, M.D. '08, April.

Minnie B. K. (Mrs. Marvin M.) Harris, Ph.D. '30 (Bacteriol.), fac. '29–'37, May 20.

Herman A. Hoster, M.D. '38, May 14.

José R. Maymí, B.A. '24, g. '24–'25 (Med.), April 10.

Francis Morris Miller, B.A. '08, May 8.

Jared Sparks Moore, B.A. '00, g. '01–'02 (Pol. Sci.), April 10.

Roland J. Mulford, Ph.D. '01 (Polit.), May 10.

Elsmere R. Rickard, C.P.H. '35, January 16.

Harold Chase Ridgely, g. '93–'97, '00–'01 (Physics), April 24, 1950.

Benjamin Titus Roberts, B.A. '85, g. '85–'86 (Hist.), May 5, 1950.

John Schuler, g. '03–'05 (German), May 14.

Thomas Henry Shanks, g. '30–'31 (Chem.), February 5.

William Bayard Sturgis, g. '13–'14 (Chem.), April 6.

The Draftable College Man

Continued from Page 14

famed for its freedom. It was pomp without the circumstance, "about face" without any "forward march." Feeling bitter and irresolute, we went home for Christmas. Few people said, "Happy New Year."

"When they came back from Christmas, something had happened," said Registrar Irene Davis. Thirty-five men had left by the end of the first term; some of these were students who never came back from the turkey dinners. Reassuring communiques flooded the papers; Miss Davis reminded that no students had yet been drafted. The first news of January promised that draft-eligible men were still able to get employment. Dr. Bronk's Christmas message was a plea for determination, if not optimism.

Optimism was not engendered by the *News-Letter's* lead story in the second week of January, shouting "Draft Beckons—500 1-AP's Liable for Induction This Summer." By this time eight students had been called by the Reserve, National Guard, or enlistment propaganda. Those accepted by med schools were safe; this year found an unusual number of three-year men with surgical ambitions. The humor of *Jaywalker* editor Bill Fenza ("I took the Army physical; the Army is taking me. This proves we live in a democracy.") did not serve to assuage the despondency.

We felt the lowest during the last weeks of the first semester. The prevalent feeling was, "We don't know what's going on but it looks bad." But we did not slack—the overwhelming idea was to finish school, anyway, at any cost. The Honor Commission reminded, "Remember [in the exams] that this is *your* honor system and that your personal honor does not depend on your draft status."

This feeling had exceptions, of course. The thirty-five men who left did so in unreasoning haste. Their completion of the year had been assured, but many left even before the term ended. They represented, however, more the "gentleman C's," and lower, than the universal sentiment. The majority did not feel that the situation was hopeless; in spite of the lack of information and direction, they felt it was better to finish their scholastic training than to die uneducated. Remembering the cases of many after World War II, we realized that if we left now we might never come back to school again. It was no vain hope of delaying the grimy mess; we had come to Hopkins to get an education and we wanted it. The University's new plans [see *The Johns Hopkins Magazine*, April 1951], double summer sessions, and a July freshman program were provided to help us.

ON January 19, Buddy Jeanette, a local professional basketball coach, was to speak at one of the student assemblies, when Homewood House cancelled the sports talk and President Bronk himself ascended the podium. Before him in the Gym, sitting on hard chairs, lining the walls, and carpeting the floors, were almost all the students trying to get in out of the draft. The seventeen-year-olds, vets, Reservists, and ROTCmen drank coffee in Levering, but even so the President faced one of the largest and most eager crowds in his tenure. Draft eighteen-year-olds, was his platform, but defer those who, as students, are potentially the country's source of intellectual strength.

The spirit shown by the President helped us realize that the first exams were over and spring was coming. People on campus said, "You know, that guy Bronk, he's a great man." We had reached our crisis, and the fever was going down.

Engineers and other seniors began attending job interviews; because of the enlistment option, the number leaving school to join was only two by May 1. Dr. Bronk's talk seemed the turning point of reassurance. Summer school received prominent notice on registration day, May 18, even though a student editorial entitled "One and a Half Giant Steps" called for three terms instead of a twelve-week summer course. The drive to finish school was still present; if this crisis has engendered anything useful, it is a consolidation of *our* purpose in the absence of

The Next Issue

The Johns Hopkins Magazine is not published in the months of July, August, and September. The next issue will appear in October.

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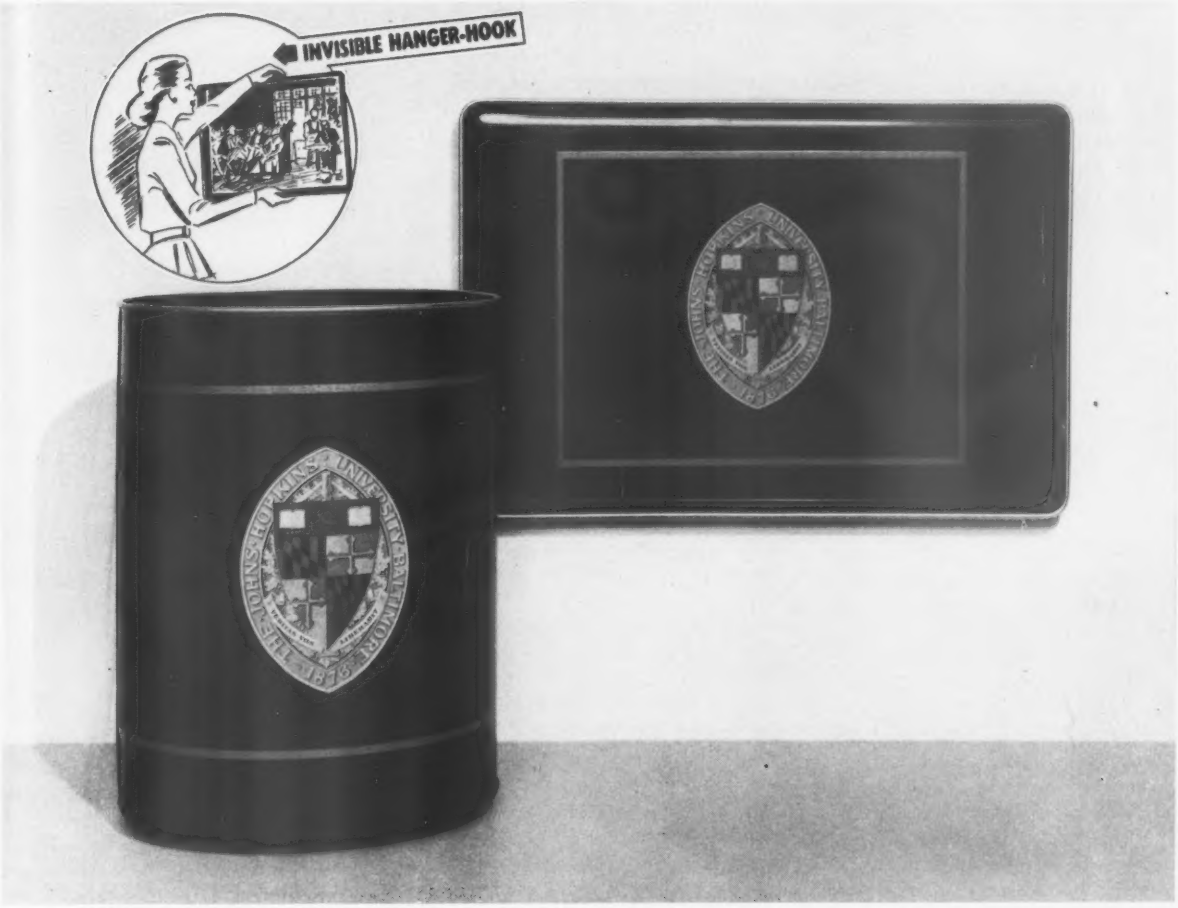

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theirs. If the people between Pusan and the Pentagon didn't know Army beans about the subject, we would go ahead as if nothing were happening, adapting our lives only where we met concrete walls, and not before theoretical abstractions.

THIS has remained the policy today. We are no draftdodgers. An excellent symbolic editorial by editor Bill Trombley read, " 'There might yet be time to catch the phalanx.' 'You're suggesting honor above self?' the other asked. 'No, no idealism; just the spirit of humanity—convention above intelligence.' " The editorial was called, "I'd Rather See Than Be One."

Humor returned too. The *Jaywalker's* Fenza, off to take his physical, reported on the traditional Army way of conducting literacy tests ("Do all you guys speak English good?"), aptitude tests ("A helpful lieutenant kept coming around to erase my mistakes. . . . It was indeed a unique twist on the honor system."), and eye tests ("The doctor showed me a chair and asked me to read a chart, but the mere fact that I was able to find the chair was proof enough for him."). It was not purely carefree humor, but merely making the best of the situation. There was no use walking the unknown way without joking a little, even though we watched the road painstakingly and seriously. Above all, we awaited the new law.

There were still painful things to happen before the long-expected law came. Bob Bilgrave, likable young basketball coach, felt the call of the Reserves; mathematics' Alfred H. Clifford and English's Charlton Hinman departed. Coach Clyde Huether soon left, too, for the old outfit. Fifth to leave was Bureau of Appointments' Bob Biunno: drafted. Eight graduate students had been called in the first term; the second-semester number was five. By May 1, fifty-four Homewood scholars altogether held Hopkins as only a memory.

BUT despite the losses, the indirection aimed itself to one general area of interest. What would the new law be like? Would we be exempted, would we be drafted, or would we find ourselves in the same vague and vacuous position which we had convinced ourselves we were leaving? No one knew.

It was no April fool who bypassed the lagging legislation and decreed—if the locals felt like it—that all students would be given a year's grace if they had good marks and/or made good in a government addition to the exam period. At the same time the news came that most senior ROTC grads would be activated, a confirmation of a sure rumor. The reaction swung a full 180 degrees. The smug boys in pinks and chevrons regretted; the rest of us were revitalized. Seniors in khaki gingerly asked the colonel about leaving the outfit, but he had them by the paycheck. The next week's vain attempt at pessimism, to the effect that this was not law but merely a presidential order did not abate the happy reaction. The announcement by Miss Davis that she expected a lot of Hopkins students who were not cleared by grades to make high-enough marks on the army test to send them through dispelled even the fears of the students who tried the sample test and reported "Say, I got three wrong. Do you think that's bad?"

The ROTC drilled on April 24, 402 men in all their military splendor. The reviewing stands held no crowds. Later a freshman approached a sophomore with "Congratulations! I hear your squad won a competition." Stared the older, "Jeez, what a hell of a thing to congratulate a person about. My squad won a competition? God." The exuberance went too far sometimes. Some of us felt that it was all done, and only Miss Davis' prodding made us mail our test applications on time. Draft officials, human for the first time, sensed this too and delayed the deadline for another ten days.

SCHOOL is now over for the year; some of us wear olive drab, mostly the new graduates. Since seventy-five per cent of each Hopkins graduating class goes on to grad school, the seniors' losses were expected to be proportionately low. ROTC took its toll; but the Reserve summonses slacked off and even the draft call was dropping—although, if it had not been for the army test, five hundred undergrads would have faced induction this summer. The test results will soon appear, and calls have been set aside until the marks are in.

WITH all this, then, how do we feel? We have traded pessimism for determinism, determinism for even a little determination. This summer we shall work, earn money, go to summer school, swim, and try to forget. These attitudes are, of course, not universal; there are sporadic individualists, ramrod soldiers through and through, Johnnies-Come-Marching-Home, Air Corps boys, final-fling fellows, and tears-in-your-teacup men.

But we go away for the summer feeling at least more secure if not safer, more resolved if not resigned. We feel, first, purposeful; our own determination has been backed by a policy at least somewhat clearer than before. We have nearly a certain chance of another year to think things out. We want to finish school. General Hershey's assurances that men in the class of '55 will probably get through the first year do not meet happy faces. We want assurance to finish; it would have been better to do our bit before the professors got us. We are not as afraid of dying as of leaving. It's a long, long way to Korea; we will be different if we return.

We are not down, either. There is still humor in the air; the *Jaywalker* is leaving the campus for a lack not of fun but of finances. June Week, '51 has been cut down for the same reason. But the yearbook and June Week for 1952 are optimistic in the hope that they can overcome the rising prices with spirit and will, attitudes not present in a pessimistic society. There will be freshmen, too, next year; Director of Admissions William Logan and Registrar Davis agree enrollment will not drop as much as a hundred, and that in strict accordance with the new University plan.

Next year's yearbook will not bid for the title *Quo Vadis*. It will be called *Hullabaloo*.

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